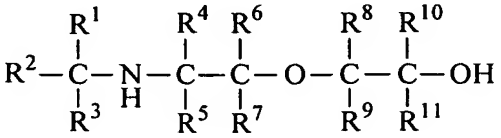
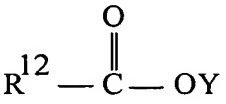
AMENDMENTS TO THE CLAIMS

1. (original) A method for the synthesis of severely sterically hindered secondary aminoether alcohols of the formula



wherein R^1 and R^2 are each selected from the group consisting of alkyl, hydroxylalkyl radicals having 1 to 4 carbon atoms or in combination with the carbon atom to which they are attached they form a cycloalkyl group having 3 to 8 carbon atoms, and R^3 is selected from the group consisting of hydrogen, alkyl hydroxyalkyl radicals having 1 to 4 carbon atoms, and mixtures thereof, and R^4, R^5, R^6, R^7, R^8, R^9, R^{10} and R^{11} are the same or different and are selected from the group consisting of hydrogen, alkyl and hydroxyalkyl radicals having 1 to 4 carbons provided that at least one of R^4 or R^5 bonded to the carbon atom directly bonded to the nitrogen atom is an alkyl or hydroxyalkyl radical when R^3 is hydrogen, the process involving reacting an organic carboxylic acid or salt of a carboxylic acid of the formula

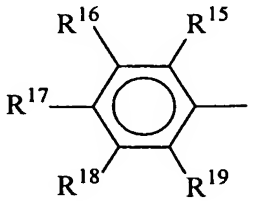


wherein R^{12} is selected from the group consisting of alkyl radicals having 1 to 4 carbon atoms, aryl radicals bearing hydrogen or one or more C_1-C_{10} alkyl groups substituted thereon, and mixtures thereof, and Y is selected from the group consisting of hydrogen, alkali metal, ammonium, and mixtures thereof, with a sulfonyl halide, a sulfuryl halide, a mixed sulfuryl ester halide, or a mixed sulfuryl amide halide of the formula

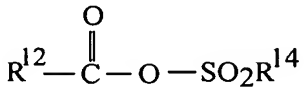
$$R^{14}SO_2X \ , \ SO_2X_2 \ , \ R^{14}OSO_2X \ , \text{ or } R_2^{14,14'}NSO_2X$$

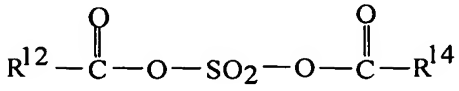
wherein X is selected from the group consisting of F, Cl, Br, I, and mixtures thereof, and R^{14} and $R^{14'}$ are the same or different and each is selected from the group consisting of alkyl radicals having 1 to 4 carbon atoms, haloalkyl radicals of the formula $C_nH_{(2n+1)-w}Z_w$

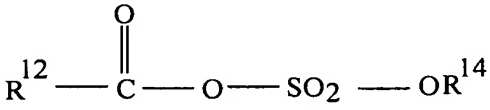
wherein n is 1 to 4, Z is selected from the group consisting of F, Cl, Br, I, and mixtures thereof, and w ranges from 1 to 5, and aryl radicals

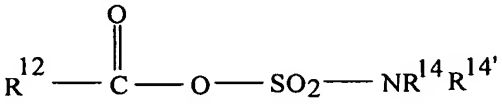


wherein R^{15}, R^{16}, R^{17}, R^{18}, and R^{19} are the same or different and are selected from hydrogen and alkyl radicals having 1 to 20 carbon atoms, and mixtures thereof, to yield acyl sulfonate material of the general formula

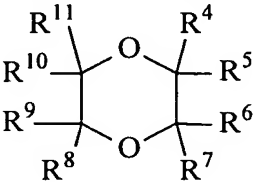




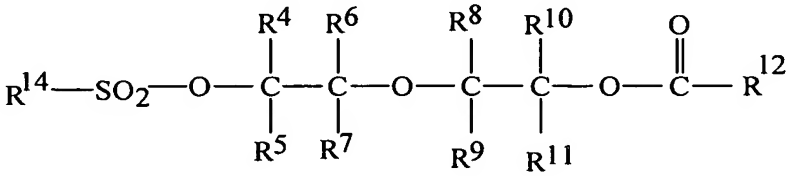


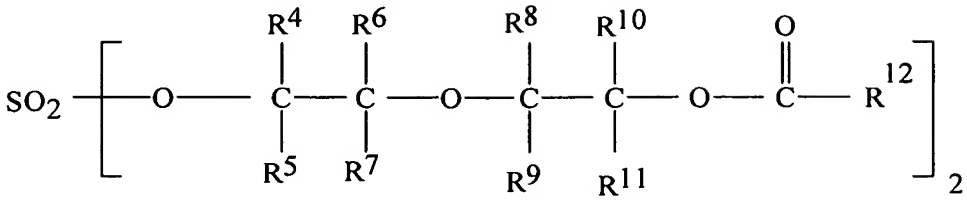


which is then reacted with a dioxane of the formula



wherein R^4, R^5, R^6, R^7, R^8, R^9, R^{10}, and R^{11} are the same or different and are selected from hydrogen, alkyl and hydroxyalkyl radicals having 1 to 4 carbons to yield





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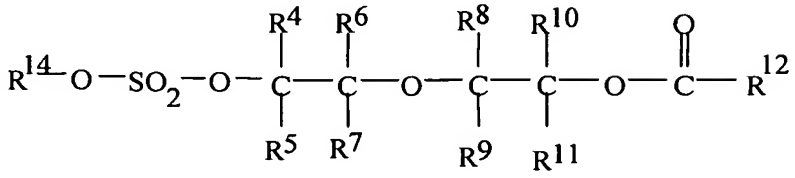
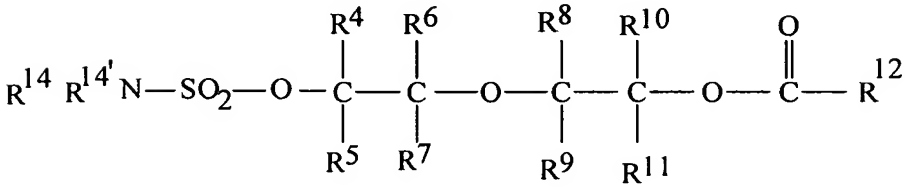
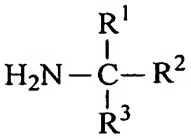


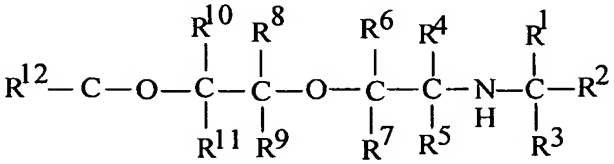
or



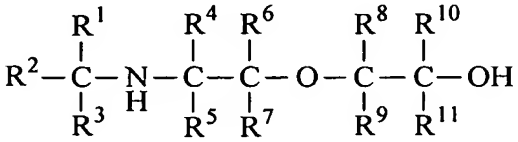
which is then aminated with an alkylamine of the formula



wherein R^1, R^2, and R^3 are as previously defined to yield



which is then hydrolyzed with base to yield



2. (original) The method of claim 1 for the synthesis of severely sterically hindered secondary aminoether alcohols using sulfonyl halide of the formula $R^{14}SO_2X$.

3. (original) The method of claim 1 for the synthesis of severely sterically hindered secondary aminoether alcohols using sulfuryl halide of the formula SO_2X_2.

4. (original) The method of claim 1 for the synthesis of severely sterically hindered secondary aminoether alcohols using the mixed sulfuryl ester halide of the formula $R^{14}OSO_2X$.

5. (original) The method of claim 1 for the synthesis of severely sterically hindered secondary aminoether alcohols using the mixed sulfuryl amide halide of the formula $R_2^{14,14'}NSO_2X$.

6. (currently amended) The method of according to ~~any one of the preceding claims~~ claim 1, 2, 3, 4 or 5 wherein R^1, R^2 and R^3 are methyl radicals.

7. (currently amended) The method of according to ~~any one of the preceding claims~~ claim 1, 2, 3, 4 or 5 wherein R^4, R^5, R^6, R^7, R^8, R^9, R^{10}, and R^{11} are hydrogen.

8. (currently amended) The method of according to ~~any one of the preceding claims~~ claim 1, 2, 3, 4 or 5 wherein R^{15}, R^{16}, R^{18}, and R^{19} are hydrogen and $R^{17}$is hydrogen or methyl.

9. (currently amended) The method of according to ~~any one of the preceding claims~~ claim 1, 2, 3, 4 or 5 wherein the base is selected from alkali metal hydroxide, alkali metal alkoxide, or alkali metal carbonate.

10. (currently amended) The method of according to ~~any one of the preceding claims~~ claim 1, 2, 3, 4 or 5 wherein Y is hydrogen or sodium.

11. (currently amended) The method of according to ~~any one of the preceding claims~~ claim 1, 2, 3, 4 or 5 wherein R^1, R^2 and R^3 are methyl, R^4, R^5, R^6, R^7, R^8, R^9, R^{10}, and R^{11} are hydrogen, R^{15}, R^{16}, R^{18}, and R^{19} are hydrogen, R^{17} is hydrogen or methyl, and Y is hydrogen, sodium, or ammonium.

12. (currently amended) The method of according to ~~any one of the preceding claims~~ claim 1, 2, 3, 4 or 5 wherein the acyl sulfonate is made by reacting organic carboxylic acid or the salt of a carboxylic acid with the sulfonyl halide, sulfuryl halide, mixed sulfuryl ester halide or mixed sulfuryl amide halide at a temperature in the range of between about -20 to 200°C at a pressure between about 1 bar and 100 bars, the acyl sulfonate is reacted with the dioxane at a molar ratio of dioxane to acyl sulfonate in the range of 1:1 to 10:1 at a temperature of between about 50°C to about 200°C to yield a cleavage product, the cleavage product and the alkyl amine reacted at an amine to sulfonate group ratio ranging from about stoichiometric to about 10:1 at pressure of from about atmospheric (1 bar) to about 100 bars at temperature of from about 40°C to about 200°C, and the resulting aminated product is hydrolyzed with base at a temperature from about 20°C to about 110°C.

13. (currently amended) The method of according to ~~any one of the preceding claims~~ claim 1, 2, 3, 4 or 5 wherein the organic carboxylic acid or the salt thereof, the sulfonyl halide, sulfuryl halide, mixed sulfuryl ester halide or mixed sulfuryl amide halide and the dioxane care combined in a single step to produce a reaction mixture, the reaction mixture being heated at a temperature of between about 50°C to about 200°C to produce the cleavage product, the cleavage product and the alkylamine are reacted at am amine to cleavage product ratio ranging from about stoichiometric to about 10:1 at a pressure from about atmospheric (1 bar) to about 100 bars at a temperature of from about 40°C to about 200°C, the resulting aminated product being reacted with base at a temperature from about 20°C to about 110°C.

Applicants request that the present application be examined on the basis of the above presented amended claims.

Respectfully submitted,

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[X] Pursuant to 37 CFR 1.34(a)

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